

What is claimed is:

1. A drum type washing and drying machine comprising:
  - a rotary drum;
  - 5 a water tub including therein the rotary drum;
  - a water supply member for supplying cooling water into the water tub;
  - a heater for heating air;
  - a blower for blowing the heated air into the water tub
  - 10 to evaporate moisture from laundry articles in the water tub; and
  - a dehumidification means for cooling and dehumidifying air containing the evaporated moisture by the cooling water,
  - wherein the dehumidification means is provided in a
  - 15 space between the water tub and the rotary drum.
2. The drum type washing and drying machine of claim 1, wherein the dehumidification means is configured to flow the cooling water along an inner wall of the water tub to
- 20 dehumidify the air containing the evaporated moisture.
3. The drum type washing and drying machine of claim 1, wherein a passing waterway for flowing the cooling water and water tub are molded in one body.
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4. The drum type washing and drying machine of claim 1, wherein a passing waterway for flowing the cooling water is detachably installed to the water tub.

5 5. The drum type washing and drying machine of claim 1, wherein a plurality of passing waterways for flowing the cooling water is installed to the water tub, each passing waterway flowing the cooling water independently of the others.

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6. The drum type washing and drying machine of claim 1, wherein a plurality of passing waterways for flowing the cooling water is installed to the water tub, the passing waterways having heads identical to each other.

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7. The drum type washing and drying machine of claim 1, wherein the rotary drum has a horizontal or slanted axis of rotation and the cooling water flows in about a bottom half of a surface of an inner wall of the water tub below the axis of rotation.

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8. The drum type washing and drying machine of claim 1, wherein a plurality of prominences and depressions is provided on a surface of an inner wall of the water tub on which the cooling water flows.

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9. The drum type washing and drying machine of claim 1,  
wherein the cooling water flows continuously from a surface  
of an outer wall to a surface of an inner wall of water tub  
5 4.

10. The drum type washing and drying machine of claim 1,  
wherein a plurality of passing waterways for flowing the  
cooling water is installed to the water tub, the cooling  
10 water flows through selected one or more passing waterways  
depending on drying conditions of the laundry articles.

11. The drum type washing and drying machine of claim 2,  
wherein a passing waterway for flowing the cooling water and  
15 water tub are molded in one body.

12. The drum type washing and drying machine of claim 2,  
wherein a passing waterway for flowing the cooling water is  
detachably installed to the water tub.  
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13. The drum type washing and drying machine of claim 2,  
wherein a plurality of passing waterways for flowing the  
cooling water is installed to the water tub, each passing  
waterway flowing the cooling water independently of the  
25 others.

14. The drum type washing and drying machine of claim 2,  
wherein a plurality of passing waterways for flowing the  
cooling water is installed to the water tub, the passing  
5 waterways having heads identical to each other.

15. The drum type washing and drying machine of claim 2,  
wherein the rotary drum has a horizontal or slanted axis of  
rotation and the cooling water flows in about a bottom half  
10 of a surface of an inner wall of the water tub below the  
axis of rotation.

16. The drum type washing and drying machine of claim 2,  
wherein a plurality of prominences and depressions is  
15 provided on a surface of an inner wall of the water tub on  
which the cooling water flows.

17. The drum type washing and drying machine of claim 2,  
wherein the cooling water flows continuously from a surface  
20 of an outer wall to a surface of an inner wall of water tub  
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18. The drum type washing and drying machine of claim 2,  
wherein a plurality of passing waterways for flowing the  
25 cooling water is installed to the water tub, the cooling

water flows through selected one or more passing waterways depending on drying conditions of the laundry articles.

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